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CIA/RR GP 63-6:L
January 1963SUMMARY OF SOVIET ACTIVITIES IN ANTARCTICAI. Historical Background

Soviet interest in Antarctic research can be traced back as far as 1937, but actual activities in the Antarctic region began in the 1946-47 season with the initiation of whaling operations. Scientific observations were begun in the next whaling season, with the attachment of a scientific vessel and a small scientific staff for the conduct of a limited program of meteorological, oceanographic, and biological research. Whaling operations have been conducted every year since 1946-47 but have been expanded since then and currently involve four fleets having a total of more than 70 units, exclusive of servicing vessels.

Operations on the ice continent were begun in 1955 as a part of the International Geophysical Year, 1957-58. This represented a logical expansion of the scope of Soviet physical environmental research from domestic to world-wide coverage. These operations have been continuous up to the present time, and the USSR now is conducting its eighth expedition to restaff and resupply a year-round operation for 1963-64.

II. Political Interests and Attitudes

The political and legal policy of the USSR dates back to 1939 when it protested the Norwegian claim to Peter I Island in western Antarctica.

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S-E-C-R-E-T

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S-E-C-R-E-T

25X1

Soviet assertion to the right of access to any part of Antarctica is predicated partly on a claimed prior-discovery of Antarctica by the Russian Imperial Navy expedition of Bellingshausen in 1820, and partly on the present scientific and economic importance of Antarctica to the world as a whole. Efforts made by the United States in 1948 to resolve the question of Antarctic sovereignty by internationalization without USSR participation were met by a formal protest from the USSR in 1950. Although the United States no longer pursued its efforts for internationalization, Soviet propaganda continued its unfriendly cold-war theme -- though not very vigorously -- up to the beginning of the IGY program. In 1958 the USSR accepted an invitation from the United States to participate in the Antarctic Conference, and in 1959 the USSR signed the Antarctic Treaty, which provides for: (1) free and unlimited air and ground inspection of all facilities and equipment in Antarctica; (2) advance disclosure of information on plans, activities, personnel, and equipment; (3) disclosure of observational data; and (4) deferral of the right to make claims or create a basis for future claims for 30 years, the duration of the Antarctic Treaty. Since the entry of the USSR into the IGY program, the typical Soviet cold-war propaganda, which accused the United States of imperialism and military intentions, including the use of Antarctica for nuclear testing, has been replaced by a moderate theme of lauding Soviet achievements.

25X1

- 2 -

S-E-C-R-E-T

25X1

S-E-C-R-E-T



Other Bloc activity in Antarctica has included Czechoslovak and East German participation at Soviet stations. Poland, however, was given a small Soviet coastal station in 1959, occupied it for only a week, and since then has failed to return although it did make two false starts. Communist Chinese plans to participate in the 1959-60 Soviet program did not materialize.

III. Main Elements of USSR Operations

A large number of research institutes of the Academy of Sciences and government organizations participate in the planning and conduct of Soviet activities in Antarctica. The major research institute is the Arctic and Antarctic Scientific Research Institute of the Northern Sea Route Administration. Interdepartmental planning and coordination with other research institutes is undertaken by the Academy of Sciences, USSR. Logistical and operational support is provided by the Northern Sea Route Administration of the Ministry of the Marine Fleet, which has had extensive experience in the Arctic.

Research activities include the basic fields of the physical environmental sciences, meteorology, geomagnetism, aurora and airglow, ionospheric physics, cosmic rays, earth currents, glaciology, oceanography, seismology, geology, geography, and gravimetry. Other activities include biological and

- 3 -

S-E-C-R-E-T



S-E-C-R-E-T



medical research, resource exploration, and mapping and charting, as well as sea and air navigation studies. Two fields of activity unique to the Soviet program are studies associated with the size and shape of the earth and systematic radio monitoring of earth satellites -- including the Discoverer series. One of the more spectacular research undertakings was the launching in 1957-58 of 22 rockets, to altitudes between 60 and 100 kilometers, for upper atmospheric observations from ships in the Antarctic waters and the southern Pacific and Indian Oceans.

Research operations include both continental and marine programs. Continental operations include (a) station observations, (b) tractor traverses, (c) "flying laboratory" observations, (d) airlifting of field teams, and (e) automatic recording weather stations. Although the initial announcement of these operations mentioned the setting up of "one or two" stations, the Soviets actually have established a total of 11 fixed stations; of these, 3 have been closed out, 1 that was inactive has been transferred to Poland for its Antarctic research, 3 are currently inactive, and 4 will conduct year-round operations for the 1963-64 season. These last four stations are Mirnyy (main base), Molodezhnaya (a new station) and Novolazaryevskaya, which are on the coast; and Vostok, which is 874 statute miles from the coast. In addition to the permanent stations, seven small, temporary stations have been set up over the years. Tractor traverse operations are conducted annually; one such traverse was conducted to the South Pole. "Flying Laboratory"

- 4 -

S-E-C-R-E-T



S-E-C-R-E-T

25X1

laboratories," which were proven to be effective in Soviet Arctic research, are employed regularly in Antarctica for meteorological and radiation observations as well as ice-reconnaissance operations. In some years these operations have been conducted during every month of the winter season.

Soviet marine operations have been very extensive and comprehensive. These are undertaken every year by the flagship, the Ob', after it has completed its resupply operations as the main supply freighter. The ship is outfitted with six or more laboratories and is staffed for research in several disciplines -- meteorology, physical oceanography, hydrochemistry, geology, geophysics, hydrography, and biology. Oceanographic survey cruises have been completed between Antarctica and Eurasia, South America, South Africa, Australia and New Zealand, as well as around Antarctica.

Logistical support operations for so comprehensive a program have been very modest. Generally two ships are used, although in one season only one ship was used and in another, three. The total number of personnel (including ships' crews) has ranged from 212 to 625. This dependence on ship operations has markedly restricted the scope of the summer research program and the over-all effectiveness of the Soviet effort. To correct this deficiency the USSR in December 1961 and January 1962 undertook an experimental transcontinental air operation from Moscow to Antarctica with two turboprop aircraft (Il-18, AN-10). These flights proved both the feasibility of intercontinental resupply by air and the advantages of using high-capability

- 5 -

S-E-C-R-E-T

25X1

S-E-C-R-E-T

25X1

turboprop aircraft for intracontinental operations. Despite this success, Soviet plans for using turboprop aircraft this year were cancelled, and the USSR will continue to depend on an air park of a dozen conventional single-engine and twin-engine aircraft.

The introduction of nuclear energy into USSR Antarctic operations has been mentioned in Soviet sources but no action has been taken up to the present.

IV. Summary and Assessment

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The chief Soviet interest in Antarctica is to gain basic scientific knowledge, including that of military value, as a part of Soviet systematic investigations of the earth as a whole -- from its core to outer space -- for the purpose of increasing Soviet mastery over natural phenomena. In addition, the USSR hopes to gain prestige from scientific achievements and to establish an image of international cooperativeness. In contrast to Arctic operations, which are conducted under severe security restrictions, Soviet operations in Antarctica are conducted openly.

- 6 -

S-E-C-R-E-T

S-E-C-R-E-T

25X1
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- 7 -

S-E-C-R-E-T

25X1



